

REMARKS

In response to the Office Action mailed February 3, 2003 the present application has been carefully reviewed and amended. Entry of the amendment and reconsideration of the application is respectfully requested.

Rejections under 35 USC § 103Claims 1-3 and 10

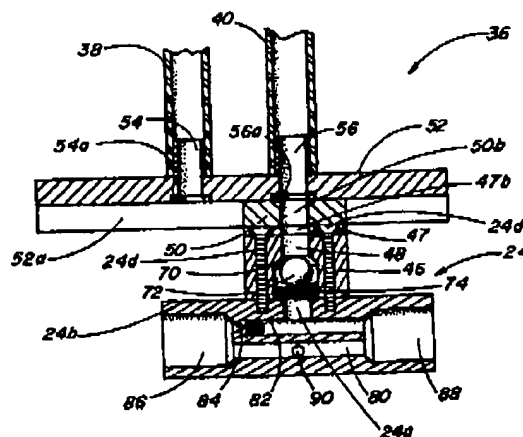
Claims 1-3 and 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Allison (U.S. Patent 5,180,439).

The Examiner asserts Allison discloses a container including an outlet valve, and a sprayer comprising a venturi 84 and a plunger 72, which "is considered to be a plunger since it moves back and forth to induce or cut off fluid from supply line 38 due to venturi effect." [Paper 4, p. 2]

Independent Claim 1 recites in part "an improved sprayer for releasably engaging a container of liquid, the container including an outlet valve ... *and* ... a plunger fluidly connected to the venturi..." [emphasis added]

Applicant respectfully submits Allison does not disclose or suggest each of the recited limitations. Specifically, Allison does not disclose the container having an outlet valve *and* a plunger fluidly connected to the venturi.

That is, the Examiner has construed the valve 36 of Allison (formed by ball 72) as both the outlet valve of the container and the recited plunger. The valve (flow terminating structure) in Allison is the ball 72.



Applicant respectfully submits the ball 72 of Allison cannot be *both* the recited plunger and the outlet valve of Claim 1. The absence of these limitations precludes Allison from sustaining a rejection of Claim 1 under 35 U.S.C. §103. As Claims 2 and 3 depend from Claim 1 and include all the limitations thereof, these claims are also in condition for allowance.

*Claim 10*

Independent Claim 10 recites in part "A method of withdrawing liquid from a *container having an outlet valve*, the method comprising: ... passing a fluid through a venturi to create a localized low pressure zone and a localized high pressure zone; and exposing a plunger to the low pressure zone or the high pressure zone to move the plunger to an activating position for *opening the outlet valve and* withdrawing liquid from the container." [emphasis added]

Again, the ball 72 (plunger) cannot be both the recited plunger and the outlet valve. Therefore, applicant respectfully submits the rejection of Claim 10 has been overcome.

*Claims 4 and 5*

Independent Claim 4 recites in part, "A sprayer assembly connectable to a container having an actuable outlet valve, comprising: ... *and ...* an actuator connected to the venturi to actuate the outlet valve in response to a flow through the venturi." [emphasis added]

That is, the container includes an outlet valve and the sprayer assembly includes an actuator. As these are separate and distinct elements, applicant respectfully submits the outlet valve 36 of Allison formed by ball 72 cannot be both of these recited structures. Therefore, applicant submits Claim 4 is in condition for allowance. As Claim 5 depends from Claim 4 and includes all the limitations thereof, Claim 5 is also believed in condition for allowance.

*Claims 6 and 7*

Independent Claim 6 recites in part, "A sprayer assembly for releasably engaging an additive source having an outlet valve, the assembly comprising: ... *and ...* an actuator moveably connected to the housing between an actuating position and a closed position."

As Allison does not disclose an outlet valve and a separate actuator, applicant respectfully submits the submits Claim 6 is in condition for allowance. As Claim 7 depends from Claim 6 and includes all the limitations thereof, Claim 7 is also believed in condition for allowance.

*Claim 8*

As amended independent Claim 8 recites in part, " A low flow sprayer assembly for engaging an additive source having an outlet valve, comprising: ... and ... a plunger moveably connected to the housing between a first position and a second position in response to a flow through the venturi."

The ball 72 of Allison, which forms the check valve structure 36 (Col. 4, lines 33-44) cannot be both the recited outlet itself of the additive source and the plunger movable between a first position a second position in response to flow through the venturi. Therefore, Claim 8 is in condition for allowance.

*Claim 9*

Independent Claim 9 stands rejected under 35 U.S.C. §103 as being unpatentable over Gosselin (U.S. Patent 5,323,935).

The Examiner relies upon the embodiment of Figures 13 and 14 in combination with the check valve 389 of the embodiment of Figure 12. [Paper 4, p. 4]

In the embodiment of Figures 13 and 14:

The bottle 432 of this package 420 houses a liquid which is drawn into the pumping mechanism 454 through the dip tube 474. As the actuator 430 is reciprocated downwardly, the stem 464 and valve member 491 begin to move downwardly against the spring 493. Thus, the volume of the liquid pressure chamber 426 created by the upper portion of the pump body 438, the valve member 491 and the stem 464 begins to shrink. This causes the pressure within this liquid pressure chamber 426 to rise until the downward force created by this pressure on the valve member 491 exceeds the

(Col. 15, lines 57-69)

upward force on the valve member 491 due to the spring 493.

Referring to FIG. 14, this causes the valve member 491 to move away from the stem 464 creating a liquid passage 458 between these two parts and permitting the liquid to escape through the passage 458 in the stem 464. The liquid then enters the actuator 430 and passes through the venturi shaped mixing chamber 496. The venturi shaped mixing chamber 496 increases the velocity of the liquid such that the pressure of the liquid is decreased below atmospheric pressure, thereby sucking air into the liquid flow path through the injection orifices 490.

(Col. 16, lines 1-13)

With respect to the check valve 389,

Focussing first on the liquid flow passage 358, once primed, liquid is located in this passage 358 up to the capillary halting point, as discussed above. As the outer  
30 actuator housing 386 is reciprocated downwardly, a reciprocating member 387 is also forced downwardly compressing the liquid in a liquid compression chamber 326 (i.e., the liquid pressure chamber) between itself and a ball check valve 389. A plunger 391 initially seals the  
35 liquid flow passage 358 at the lower end of the reciprocating member 387. This plunger 391 is configured such that as the pressure in the liquid compression chamber 326 increases, the pressure forces the plunger 391 down against a spring 393. This spring 393 is designed to  
40 maintain the plunger 391 in sealed relation against the reciprocating member 387 until a predetermined pressure is reached inside the liquid compression chamber 326. Once the predetermined pressure is reached, the plunger 391 moves away from the reciprocating mem-  
45 ber 387 and the liquid passes on through the liquid passage 358.

(Col. 14)

Thus, an additional check valve 389 incorporated into the embodiment possessing the plunger 464 would be completely redundant. There is no need for such a structure in the embodiment of Figure 13.

The Examiner has not identified any portion of the reference which would suggest or support such modification. Therefore, the rejection of Claim 9 cannot be sustained.

#### *Claims 11 and 12*

As no rejection was made of Claims 11 and 12, applicant assumes these claims are deemed allowable.

Therefore, applicant respectfully submits all pending claims, Claims 1 - 12 are condition for allowance in such action is earnestly solicited. If, however, the Examiner

feels any further issues remain, the examiners cordially invited to call the undersigned so that such matters can be promptly resolved.

Respectfully submitted,



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